

CLAIMS

1. (Cancelled) An apparatus for dispensing a fluid for forming a bond between plies of a vehicle interior panel comprising:
a fluid reservoir containing a quantity of fluid; and
a spray mechanism adapted to dispense an amount of the quantity of fluid;
wherein the reservoir is positioned above the spray mechanism such that a dispensing pressure of the fluid is controlled by the height of the fluid within the reservoir.
2. (Cancelled) The apparatus defined in Claim 1 further comprising:
a controller, wherein the controller is adapted to measure the quantity of fluid dispensed.
3. (Cancelled) The apparatus defined in Claim 2 wherein the amount of fluid dispensed is determined by obtaining a first fluid height within the reservoir and a second fluid height within the reservoir, and multiplying the difference between the first and second heights by the cross sectional area of the reservoir.
4. (Cancelled) The apparatus defined in Claim 3 wherein the controller is adapted to operate a valve attached to a feed line such that the valve is opened to refill the reservoir.
5. (Cancelled) The apparatus defined in Claim 4 wherein the reservoir is refilled to at least one of a same, higher and lower height than an initial fluid height based on the determined amount of fluid dispensed.
6. (Cancelled) The apparatus defined in Claim 4 wherein the fluid feed line is connected to a source of fluid.

7. (Cancelled) The apparatus defined in Claim 3 further comprising a pressure detecting device positioned at substantially the same elevation as the spray mechanism.

8. (Cancelled) The apparatus defined in Claim 7 wherein the fluid height is determined by the controller based on a combination of the pressure detected at the spray mechanism, a density of the fluid, and a gravitational force constant.

9. (Cancelled) The apparatus defined in Claim 8 wherein the pressure detecting device is one of a pressure transducer and a pressure gauge.

10. (Cancelled) The apparatus defined in Claim 1 wherein the reservoir is a generally vertical tube.

11. (Cancelled) The apparatus defined in Claim 1 wherein the reservoir is a tank.

12. (Cancelled) The apparatus defined in Claim 1 wherein the vehicle interior panel is a headliner.

13. (Currently Amended) A method for dispensing fluid for forming a bond between plies of a vehicle interior panel comprising:

- providing a reservoir containing an amount of fluid;
- providing a spray mechanism for dispensing the fluid from the reservoir;
- positioning the fluid within the reservoir ~~source~~ at an initial height above the spray mechanism;
- operating a controller to determine the initial height of the fluid;
- operating the spray mechanism to dispense an amount of the fluid;
- operating the controller to determine a second height of the fluid; and
- calculating the amount of fluid used during the dispensing operation.

14. (Original) The method defined in Claim 13 further comprising a valve operatively connected to the controller wherein the valve is positioned between the reservoir and a source of the fluid; and

the valve is operated by the controller to refill the reservoir.

15. (Original) The method defined in Claim 14 wherein the valve is operated by the controller to one of:

refill the reservoir to an amount greater than the initial height of fluid when the amount of fluid dispensed is less than a pre-set amount;

refill the reservoir to an amount less than the initial height of the fluid when the amount of fluid dispensed is greater than the pre-set amount; and

refill the reservoir to the same amount as the initial height of the fluid when the amount of fluid dispensed is equal to the pre-set amount.

16. (Original) The method defined in Claim 13 wherein the initial height of the fluid is checked prior to each dispensing cycle.

17. (Original) The method defined in Claim 13 wherein the controller determines the fluid height based on a density of the fluid, a fluid pressure at the spray mechanism, and a gravitational force constant.

18. (Original) The method defined in Claim 13 wherein the vehicle interior panel is a first vehicle headliner ply having a polyurethane adhesive applied thereto; and

the fluid is a catalyst that interacts with the adhesive to form a bond with a second headliner ply.

19. (New) A method for dispensing a fluid for forming a bond between plies of a vehicle panel comprising:

- providing a tube containing an amount of fluid;
- providing a source of fluid for replenishing the fluid in the tube;
- controlling the flow of fluid between the source of fluid and the tube;
- providing a spray mechanism in fluid communication with the tube, the spray mechanism being configured to dispense fluid from the tube;
- providing a controller;
- operating the controller to determine the initial height of fluid in the tube;
- providing a first vehicle panel;
- operating the spray mechanism to dispense an amount of the fluid on the first vehicle interior panel; and
- providing a second vehicle panel substantially aligned with the first vehicle panel to join the panels together.

20. (New) The method defined in Claim 19 further comprising the steps of:
operating the controller to determine a second height of the fluid in the tube;
and

calculating the amount of fluid dispensed during the dispensing operation by comparing the initial height of the fluid to the second height of the fluid.

21. (New) The method defined in Claim 20 further comprising the step of:
determining whether the desired amount of fluid was dispensed.

22. (New) The method defined in Claim 21 further comprising the step of:
refilling the tube from the source to at least one of a same, higher, and lower height than an initial fluid height based on the determination of the amount of fluid dispensed.